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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,546	07/30/2003	Shigeru Furumiya	2003_1064	6505
513	7590	09/19/2006	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			CHU, KIM KWOK	
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SUITE 800			ART UNIT	
WASHINGTON, DC 20006-1021			2627	
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DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,546	<b>Applicant(s)</b> FURUMIYA ET AL.	
	<b>Examiner</b> Kim-Kwok CHU	<b>Art Unit</b> 2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 5 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5 and 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/582,675.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Remarks***

1. Applicant's Amendment filed on June 27, 2006 has been fully considered but it is not persuasive.

With respect to the present Claims 5 and 10-12, Applicant states that his invention controls a recording position by pulse position (page 7 of the Remarks, lines 10 and 11). Accordingly, the prior art of Spruit writes optically detectable marks in form of a test information pattern in the sectors of a recording medium. This test information pattern is coded/modulated and therefore contains specific mark position information such as pulse length, pulse width etc. (Fig. 3C; column 5, lines 42-49). Therefore, similar to Applicant's claimed limitations, the prior art of Spruit controls a recording position of recorded pulses with parameters obtained from a recorded test pattern by extracting the encoded test pattern during a read operation and then compared it with the original pattern to determined an Byte Error Rate (column 6, lines 1-34).

Applicant states that in his invention, the selecting of the recording pulse information based on jitter (page 7 of the Remarks, line 13). According, the prior art of Spruit's encoded test pattern is also designed to minimize error rate which is caused by jitter.

Furthermore, Applicant states that in his invention, the

storing of the recording pulse information is by using a mark length and space length (page 7 of the Remarks, lines 14 and 15). Accordingly, the recording of the prior art of Spruit's test pattern (recording pulse information) containing encoded pulse patterns of mark length and space length. The encoded test pattern determines how the space and length (rising and fall edges) of a series of modulated marks should be written in the future write operation so that a predetermined reliability in term of the Byte Error Rate can be achieved.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

3. Claims 5 and 10-12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Spruit et al. (U.S. Patent 5,617,399).

4. Spruit teaches a recording apparatus having all of the steps as recited in claim 5. For example, Spruit teaches the following:

(a) With respect to Claim 5, obtaining a recording pulse parameter by reading recording pulse parameters (test information pattern) from a writable optical disc to which are prerecorded (selectable pattern in a buffer sector) recording pulse parameters defining recording pulse position information for each of plural possible mark length and space length combinations (Fig. 5; column 1, lines 42-49; test pattern is selectable; column 2, lines 40 and 41); performing a first test write to the optical disc using the recording pulse position information for one combination selected from all mark length and space length combinations in the recording pulse parameters

(Fig. 5; step S1; test pattern can be random or selectable; column 2, lines 40 and 41); reproducing the first test write and detecting a first jitter from the reproduced signal (Fig. 5; step S4); adding a first specific amount of change (light intensity) to the recording pulse position information for the one combination selected from all mark length and space length combinations (Fig. 5; light intensity is set according to the read result); performing a second test write to the optical disc using the changed recording pulse position information (Fig. 5; steps S6 and S11 are loop back to step S3); reproducing the second test write and detecting a second jitter from the reproduced signal (Fig. 5; test write and read are repeated); comparing the first jitter (error) and second jitter, and selecting the recording pulse position information used for the test write with less jitter (Fig. 5; steps S5 and S14); when there one position information is selected for one combination selected from all mark length and space length combinations, and another recording pulse position information is selected for another combination selected from all mark length and space length combinations, an intermediate recording pulse position information for a combination between the one and another combinations is obtained by interpolation from the one recording pulse position information and the another position information (Fig. 5; column 11, lines 23-30).

5. Apparatus claim 10 is drawn to the apparatus corresponding to the method of using same as claimed in claim 5. Therefore apparatus claim 10 corresponds to method claim 5, and is rejected for the same reasons of anticipation as used above.

6. Spruit teaches a recording apparatus having all of the steps as recited in claim 11. For example, Spruit teaches the following:

(a) With respect to Claim 11, determining a recording pulse parameter (light intensity) for an optical disc having prerecorded (selectable pattern in a buffer sector) recording pulse parameters (test information pattern) defining recording pulse position information for each of a plurality of mark length and space length combinations (Fig. 5; column 1, lines 42-49; test pattern is selectable; column 2, lines 40 and 41); performing a first test write to the optical disk using the prerecorded recording pulse parameter for a first mark length and space length combination (Fig. 5; step S1; test pattern can be random or selectable; column 2, lines 40 and 41); reproducing the first test write and detecting a first jitter from the reproduced first test write (Fig. 5; step S4); adding a first correction value to the prerecorded recording pulse parameter to form a second recording pulse parameter and performing a second test write to the optical disc using the

second recording pulse parameter (Fig. 5; light intensity is set according to the read result); reproducing the second test write and detecting a second jitter from the reproduced second test write (Fig. 5; step S6 and S11 are loop back to step S3); comparing the first jitter with the second jitter (Fig. 5; steps S5 and S14); selecting either the prerecorded recording pulse parameter or the second recording pulse parameter for the first mark length and space length combination based on the comparison of the first jitter with the second jitter (Fig. 5; the first test pattern is used to determine the recording pulse parameter and there is no repeat test write); when one recording pulse parameter is selected for one mark length and space length combination and another recording pulse parameter is selected for another mark length and space length combination, an intermediate (interpolated) recording pulse parameter for a combination between the one and another combinations is obtained by interpolation from the one and another recording pulse parameters (Fig. 5; column 2, lines 11-18; column 11, lines 23-30; the third mark length and space length combination is the result of a new light intensity setting by the interpolation process).



7. Apparatus claim 12 is drawn to the apparatus corresponding to the method of using same as claimed in claim 11. Therefore apparatus claim 12 corresponds to method claim 11, and is rejected for the same reasons of anticipation as used above.

### **Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ide et al. (5,513,165) is pertinent because Ide teaches a method of controlling the recording pulse with a test pattern.

Chung et al. (4,873,680) is pertinent because Chung teaches a method for detecting and compensating pit extension in an optical disk.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action

10. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch, can be reached on (57) 272-7589.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).



WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER

Kim-Kwok CHU

*CK* 9/15/2006

Examiner AU2627  
September 15, 2006

(571) 272-7585